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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,722

07/27/2006

Andrew Ian Cooper

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EXAMINER

ALAWADI, SARAH

ART UNIT

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4121

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04/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,722	Applicant(s) COOPER ET AL.	
	Examiner SARAH AL-AWADI	Art Unit 4121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/23/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This application is a 371 (national stage application) of PCT/EP2004/014755 which claims foreign priority to 0401947.7 filed 01/28/2004.

Claims 1-20 are pending.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7 drawn to porous bodies.

Group II, claim(s) 8-20 drawn to a method of preparing porous bodies.

As set forth in Rule 13.1 of the Patent Cooperation Treaty (PCT), "the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept." Moreover, as stated in PCT Rule 13.2, "where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features." Furthermore, Rule 13.2 defines "special technical features"

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as "those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." A lack of unity of invention determination begins with a consideration of the claims in light of the description and drawings. Lack of unity of invention may be directly evident "a priori," or before considering any prior art when no special technical feature is common to each of the independent claims. Alternatively, lack of unity of invention may only become evident "a posteriori," or after considering the claims in relation to the prior art.

In the instant application, the claimed inventions listed as Group I and II are not so linked as to form a "single general inventive concept" under PCT Rule 13.1 and 37 C.F.R. 1.475(a), because they lack the same or corresponding special technical feature. The technical feature shared by Groups I and II is porous bodies which are soluble or dispersible in non-aqueous media comprising a three dimensional open-cell lattice containing 10% to 95 % by weight of a polymeric material which is soluble in water immiscible non-aqueous media and 5% to 95% by weight of a surfactant, said porous bodies having an intrusion volume as measured by mercury porosimetry of at least 3 ml/g. Reference '953 discloses porous bodies such as porous polymeric materials and a level of surfactant that ensures adequate absorbtivity. (abstract). The polymer material of the invention can consist of at least 90% by weight (column 2, lines 60-63) and the polymer material can be made of lightly cross-linked polystyrene. The optimum concentration of surfactant by monomers is 20%. (column 5, lines 65-67) The structure can be a three dimensional open-cell lattice because reference '953

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teaches that porous polymer beads can be compressed and bonded together, and that the interior of the blocks is homogenous and that blocks are uniform in pore and cavity distribution. (column 3 and 4, lines 67 and line 1-5) Furthermore regarding claims 1 and 2, the porous blocks can be in any desired shape, and does not restrict the process to containers in which agglomeration of beads under pressure can be carried out, thus can include the process of forming beads. (column 6, lines 31-35) Reference '953 teaches that the porous polymeric material can have a dry density of between 0.02 to 0.08g/cc (or ml/g) comprising linked pores having a pore volume of more than 9cc/g (9ml/g) and contained in an aqueous or non-aqueous media. (column 2, lines 54-59) This anticipates the claimed intrusion volume range of at least 3 ml/g. Therefore, Group I does not share a special technical feature with the instant claims of Group II, the claims are not so linked within the meaning of PCT Rule 13.2 as to form a single inventive concept over the prior art and unity between Groups I and II is broken. Because unity of invention is lacking, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed under 37 CFR 1.143 **and (ii) identification of the claims encompassing the elected invention**, including any claims subsequently added.

The election of an invention may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply

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does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

Should applicant traverse on the ground that the claimed inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the claimed inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the claimed inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other claimed inventions.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with

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37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b).

Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).i

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any

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inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

During a telephone conversation with Michael Aronson on April 12, 2009 a provisional election was made to prosecute the invention of Group I, to a composition of porous bodies, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

The IDS filed on 08/23/2006 is acknowledged.

Priority

Applicant's claim for foreign priority under 35 U.S.C. 119 is not considered for Application Number (UK) 0401947.7 filed January 24th 20004 because applicant needs to submit a certified copy.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b)

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented

Claims 1-2 and 5-7 are provisionally rejected on the ground of nonstatutory obviousness-double patenting as being unpatentable over claims 1-2, and 8-10 of copending Application No. 10/587732. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims and the referenced claims are directed to the same subject matter which is: a porous body comprising water-soluble polymer, surfactant, and hydrophobic or hydrophilic materials. The instant claims and the claims of the copending application are nearly identical with the exception that the copending application requires less than 10% by weight of a water soluble material other than a surfactant, 5% to 95% by weight of a surfactant and a hydrophobic material to be dispersed when the polymeric material dissolves. The instant application discloses 10% to 95% by weight of a water-soluble polymeric material other than a surfactant, and 5% to 95% weight of a surfactant, and does not teach a hydrophobic material in claim 1. Although the amount of polymeric material is 10% to 95% in the instant application and less than 10% in the copending application, it is the examiner's position that the values are close enough that one of ordinary skill in the art would have expected the same properties. Case law holds that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Furthermore, although the hydrophobic material of claim 1 of the

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copending application is not recited in claim 1 of the instant application, the hydrophobic material is recited in dependent claim 8 of the instant application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Barby et al. United States Patent 4522953.

Claim 1 recites a composition of porous bodies which are soluble in non-aqueous media comprising a three dimensional open-cell lattice containing 10-95% by weight of a polymeric material which is soluble in hydrophobic or water immiscible non-aqueous media and 5 to 90% by weight of a surfactant, said porous bodies having an intrusion volume as measured by mercury porosimetry of at least 3ml/g.

Reference '953 discloses porous bodies such as porous polymeric materials and a level of surfactant that ensures adequate absorbtivity. (abstract). The polymer material of the invention can consist of at least 90% by weight (column 2, lines 60-63) and the polymer material can be made of lightly cross-

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linked polystyrene. The porous bodies can contain an aqueous or non-aqueous liquid. (claim 3) The liquid can be hydrophobic (claim1) and the porous polymeric block material is formed from a water in-oil emulsion. The optimum concentration of surfactant by monomers is 20%. (column 5, lines 65-67) The structure can be a three dimensional open-cell lattice because reference '953 teaches that porous polymer beads can be compressed and bonded together, and that the interior of the blocks is homogenous and that blocks are uniform in pore and cavity distribution. (column 3 and 4, lines 67 and line 1-5) Furthermore regarding claims 1 and 2, the porous blocks can be in any desired shape, and does not restrict the process to containers in which agglomeration of beads under pressure can be carried out, thus can include the process of forming beads. (column 6, lines 31-35) Reference '953 teaches that the porous polymeric material can have a dry density of between 0.02 to 0.08g/cc (or ml/g) comprising linked pores having a pore volume of more than 9cc/g (9ml/g) and contained in an aqueous or non-aqueous media. (column 2, lines 54-59) This anticipates the claimed intrusion volume range of at least 3 ml/g.

Claim 3 recites that the porous bodies as claimed in claim 1 are made of polymeric material wherein the homopolymer or copolymer is made from monomes such as styrenics, and claim 4 recites that the polymeric material is either polystyrene or polyvinyl acetate. Reference '953 teaches that the polymer material can be made of lightly cross-linked polystyrene. (column 5, lines 3-5) This is a type of styrenic as defined by the instant specification page 2, line 2.

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Claim 5 recites that the porous bodies as claimed in claim 1 have water soluble and/or water insoluble materials incorporated. An example that is recited in claim 6 of a soluble material is water soluble polymers, and claim 7 recites that an example of water insoluble materials can be that of hydrophobic polymeric materials. Reference '953 teaches the use of hydrophilic and hydrophobic polymer materials because there is an internal phase emulsion present, where in the continuous phase the monomer and surfactants, and the internal phase comprises water. (column 3, lines 36-40) The title of the invention is porous cross- linked polymeric materials and their use as carriers for included liquids. To carry included liquids such as water which is disclosed in the patent, it is inherent that the polymer must comprise of hydrophilic block portions and hydrophobic blocks.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitagawa, Naotaka PCT/ US98/12797 as cited on IDS form filed 08/23/2006.

Claim 1 and 2 recites a composition of porous bodies (that can be in the form of beads) which are soluble in non-aqueous media comprising a three dimensional open-cell lattice containing 10-95% by weight of a polymeric material which is soluble in hydrophobic or water immiscible non-aqueous media and 5 to 90% by weight of a surfactant, said porous bodies having an intrusion volume as measured by mercury porosimetry of at least 3ml/g.

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Reference '797 teaches the production of porous crosslinked hydrophilic polymeric microbeads wherein at least 10% are spherical and the polymeric material is 30 % by weight of the emulsion. (page 4, line 19, and line 28, and page 14, line 14) The invention consists of 50% of the total polymerizable monomer that are hydrophilic. (page 5 line 30) Furthermore, a single monomer or mixture of types can be used in the emulsion such as hydrophilic and hydrophobic monomers. Nonionic surfactants may be present as a type of emulsifier in an amount of 1 to about 30 wt. percent. (page 16 lines 15-17 and page 17, lines 1-4) The fact that the porous bodies have a mercury porosimetry of at least 3 ml/g is an intended property of the composition. Example 30 of reference '797 teaches the use of an alcohol (non-aqueous) containing emulsion.

Regarding instant claims 3 and 4, reference '797 teaches an example of porous bodies that contain polystyrene/divinylbenzene which is a type of styrenic.

Claim 5 recites that the porous bodies have water soluble and water insoluble materials incorporated within. Reference '797 teaches that a single monomer or mixture of types can be used in the emulsion such as hydrophilic and hydrophobic monomers. (page 14, lines 3-12) The composition can include suitable stabilizers such as polyethylene glycol which is a soluble material. (page 17, lines 24-31) The hydrophilic porous bodies can be used as carriers to provide sustained release of an agent such as fragrance, insecticides or a cosmetic. (page 28, lines 31-34)

Correspondence

Any inquiry concerning this communication or earlier communications from

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the examiner should be directed to Sarah Al-Awadi whose telephone number is (571) 270-7678. The examiner can normally be reached on 8:30 am - 5:30 pm; M-F (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Nolan can be reached on (571) 272-0847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SARAH AL-AWADI/
Examiner, Art Unit 4121

/Patrick J. Nolan/
Supervisory Patent Examiner, Art Unit 4121